

# **Investigation of the moderation effect of gender and study level on the acceptance and use of generative AI by higher education students: Comparative evidence from Poland and Egypt**

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## **Abstract**

This study delves into the implications of incorporating AI tools, specifically ChatGPT, in higher education contexts. With a primary focus on understanding the acceptance and utilization of ChatGPT among university students, the research utilizes the Unified Theory of Acceptance and Use of Technology (UTAUT) as the guiding framework. The investigation probes into four crucial constructs of UTAUT—performance expectancy, effort expectancy, social influence and facilitating conditions—to understand their impact on the intent and actual use behaviour of students. The study relies on data collected from six universities in two countries and assessed through descriptive statistics and structural equation modelling techniques, and also takes into account participants' gender and study level. The key findings show that performance expectancy, effort expectancy, and social influence significantly influence behavioural intention. Furthermore, behavioural intention, when considered alongside facilitating conditions, influences actual use behaviour. This research also explores the moderating impact of gender and study level on the relationships among these variables. The results not only augment our comprehension of technology acceptance in the context of AI tools but also provide valuable input for formulating strategies that promote effective incorporation of ChatGPT in higher education. The study underscores the need for effective awareness initiatives, bespoke training programmes, and intuitive tool designs to bolster students' perceptions and foster the wider adoption of AI tools in education.

ChatGPT is a tool that is quickly gaining worldwide recognition.

ChatGPT helps with writing essays and solving assignments.

ChatGPT raises ethical concerns about authorship, plagiarism and ethics.

This study explores students' acceptance of ChatGPT as an aid in their education, which has not been studied previously.

We used the extended Unified Technology Acceptance and Use of Technology theory to test what factors mostly influence the use of ChatGPT by students.

We conducted a multiple study in Poland and Egypt based on sampling strategy from six universities.

ChatGPT is a global game changer and should be incorporated into study programmes.

The limitations of ChatGPT should be well explained and known since it is prone to making mistakes.

Higher education teachers should be aware of ChatGPT's capabilities.